

### St. Louis Regional Mobility Report AUGUST 2012



### Monitor Aggressively, Manage Proactively

### **GuidePost**

- Daily lane closures and blasting on I-270
   Widening Project halted on August 31, 2012
  - Blasting and daily closures will continue in the Spring of 2013
- I-64 Double Deck Structure work expands to closures for both eastbound/westbound
- Arterial peak travel times remained fairly stable for the third month in a row
  - Minor travel time increases on routes in AM peak with schools in session
- Freeway mobility decreased along all corridors during both the AM / PM rush
  - School year travel increases resumed



A MoDOT Motorist Assist Supervisor provides traffic control and incident management during a garbage truck crash on southbound I-55.

### **Mobility Snapshot**



**Indicates Improving Trend** 



**Indicates Worsening Trend** 



Freeway Mobility
Seasonal Decrease



Arterial Mobility
Seasonal Decrease



**Major Incidents**July: 9 → August: 6



Major Impact Work Zones
July: 18 → August: 12



Moderate Impact Work Zones
July: 8 → August: 6

#### **ZONING IN**



TMC observed work zones breakdown: 466

Major Impact on Travel: 12 - 2.6%

Moderate Impact on Travel: 6 – 1.3%

Minor Impact on Travel: 448 – 96.1%

SL District Work Zone Inspections:189

• July 2012: 48%

August 2012: 32%

Goal: 50%

SL District Mobility Rating:

July 2012: 96%

August 2012: 98%

Goal: 91%

Visibility levels:

July 2012: 91%

August 2012: 98%

Goal: 91%

Work zone crashes in August: 12





### **Work Zone Summary**



\*Impact Levels described in Data Key

TMC Observed Work Zones August 2012						
Level of Travel Time Impact Number of Work Zones						
Major Impact	12					
Moderate Impact	6					
Minor Impact	449					
Total	466					

**Major Impact** 

(15 Minutes or Above Additional Travel Time)

#### <u>I-64 Westbound AM on I-64 Double-Deck Project – Two Right Lanes Closed</u>

- Major travel impact occurred on (1) date: 8/18
- Average additional travel time of 15 minutes
- All mitigation efforts were in full use during these closures

#### I-44 Eastbound AM/PM at Antire Road - Two Left Lanes Closed

- Major travel impact occurred on (3) dates: 8/4, 8/10, 8/12
- Average additional travel time of 15 minutes
- All mitigation efforts were in full use during these closures

#### <u>I-270 Northbound/Southbound AM/PM for Blasting and Debris Removal --Total Closure All Lanes</u>

- Major travel impact occurred on (8) dates: 8/1, 8/9, 8/16, 8/20, 8/23, 8/24, 8/27, and 8/28
- Average additional travel time of 20 minutes
- All mitigation efforts were in full use during these closures

Moderate Impact

(10-14 Minutes Additional Travel Time)

#### I-64 Westbound AM/PM on I-64 Double-Deck Project -- Double Lane Closures

- Moderate travel impact occurred on (4) dates 8/9, 8/11, 8/22 and 8/28
- Average additional travel time of 13 minutes
- All mitigation efforts were in full use during these closures

#### I-44 Eastbound AM Antire Road -- Left Lane Closure

- Moderate travel impact occurred on (1) date 8/17
- Average additional travel time of 11 minutes
- All mitigation efforts were in full use during these closure

#### I-270 Northbound/Southbound AM/PM for Blasting and Debris Removal -- Total Closure All Lanes

- Moderate travel impact occurred on (1) date 8/22
- Average additional travel time of 14 minutes
- All mitigation efforts were in full use during this closure



### **Work Zone Summary**







#### Work Zone Related Crashes

#### 8/4 (Saturday) 4:30 PM Eastbound I-70 at Earth City Expressway – Two Left Lanes Closed

- A minor multi-vehicle crash involving 5 vehicles occurred within work zone signage before work zone
- There was an additional travel time of 10 minutes with advanced messaging warning of travel time increases
- Completely cleared within 25 minutes
- All work zone signage was in place and the CMS/DMS were in use

#### 8/8 (Wednesday) 5:56 AM Westbound I-64 past 9th Street - Left Lane Closed

- A minor vehicle crash within the work closed the right lane
- Area Engineer and Work Zone Coordinator notified
- All work zone signage was in place and the CMS/DMS were in use
- IDOT & MoDOT Motorist Assist responded and cleared the incident

#### 8/12 (Sunday) 4:36 AM Westbound I-64/55/70 Split to Jefferson – Closed at Mississippi River

- A minor vehicle crash prior to cone setup but within the static signs warning motorists of the work ahead
- Crash closed all Westbound lanes for 47 minutes, incident cleared at 5:17 am with a 24 minute queue
- Area Engineer and Work Zone Coordinator notified
- All work zone signage was in place and the CMS/DMS were in use
- IDOT & Illinois State Police responded and worked to clear the incident

#### 8/14 (Tuesday) 12:12 PM Westbound I-44 at Antire Road - Right Lane Closed

- A minor vehicle crash at the Antire exit, Emergency Response and Police responded
- There was additional travel time of 7 minutes through the work zone
- Area Engineer and Work Zone Coordinator notified
- All work zone signage was in place and the CMS/DMS were in use





### **Work Zone Summary**





#### 8/17 (Friday) 5:57 AM Southbound I-55 before Route A – All Lanes Open

- A garbage truck traveling through the work zone hit the attenuators and jumped the Jersey wall spilling fuel and debris on the roadway closing the right lane
- Police, Emergency Response and the Department of Natural Resources responded to the scene
- Accident took over 8 hours to clear
- All work zone signage was in place and the CMS/DMS were in use

#### 8/20 (Monday) 7:55 AM Eastbound I-64 past Chestnut – Right Lane Closed

- A minor crash in the work zone
- Emergency Response and Police responded to the scene
- Traffic caused additional travel time of 5 minutes
- All lanes cleared at 8:29 AM with a 13 minute gueue
- All work zone signage was in place and the CMS/DMS were in use

#### 8/22 (Wednesday) 1:28 PM Westbound Route 30 at Route 141 - Right Lane Closed

- A Contractor TMA was hit shutting down Route 30 for two hours
- Emergency Response and MSHP responded to the scene
- No CMS/DMS were in use for this operation

#### 8/23 (Thursday) 9:17 PM Westbound I-44 at Antire Road - Right Lane Closed

- A minor crash in the work zone blocked the right lane
- Emergency Response and Police responded to the scene
- No injuries reported or additional travel time observed
- All work zone signage was in place and the CMS/DMS were in use

#### 8/23 (Thursday) 1:18 PM Northbound I-270 past Big Bend - All Lanes Open

- A multi-vehicle crash involving 5 vehicles closed the two right lanes and delayed blasting by 30 minutes
- Emergency Response and Police responded to the scene
- No injuries reported
- All work zone signage was in place and the CMS/DMS were in use

#### 8/24 (Friday) 3:14 PM Eastbound I-64 at 11th Street - Right Lane Closed

- A minor crash in the work zone with an attenuator being struck
- Emergency Response and Police responded to the scene and one person was transported
- Vehicle was moved to the closed lane
- No additional travel time
- All work zone signage was in place and the CMS/DMS were in use

#### 8/25 (Sunday) 1:01 AM Westbound I-70 at Kingshighway- Right Lane Closed

- A minor crash in the work zone
- Emergency Response and Police responded to the scene
- Vehicle was moved to the ramp
- All work zone signage was in place and the CMS/DMS were in use

#### 8/29 (Wednesday) 2:52 PM Westbound I-44 at Antire Road- Right Lane Closed

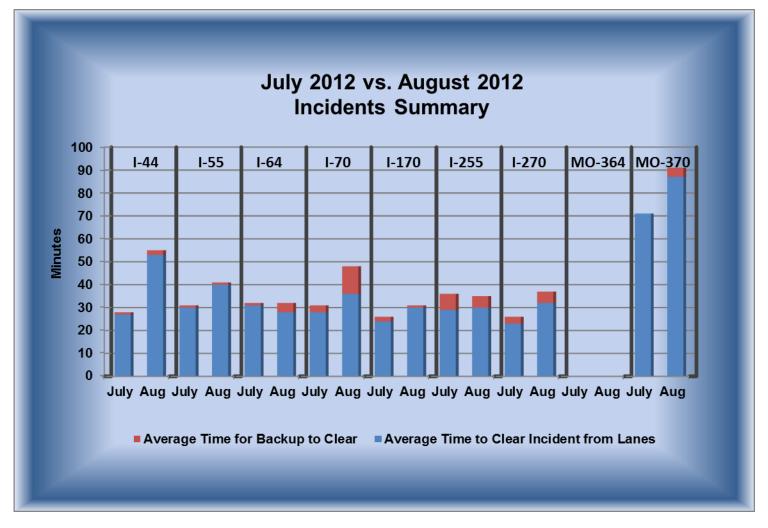
- A single vehicle accident involving a tractor trailer in the work zone
- Truck lost load of concrete bags blocking the right lane for clean up
- The lane drop was pulled to ease traffic through the work zone
- All work zone signage was in place and the CMS/DMS were in use

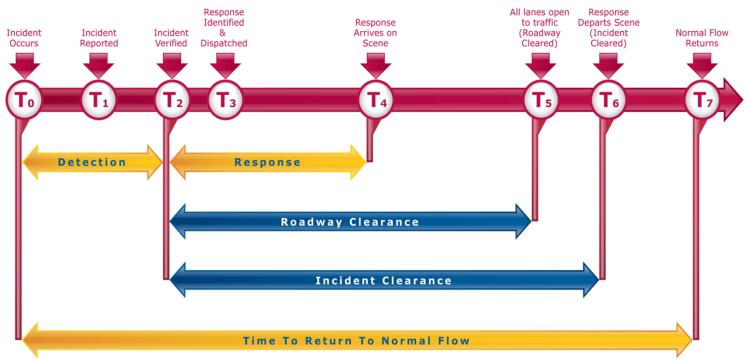








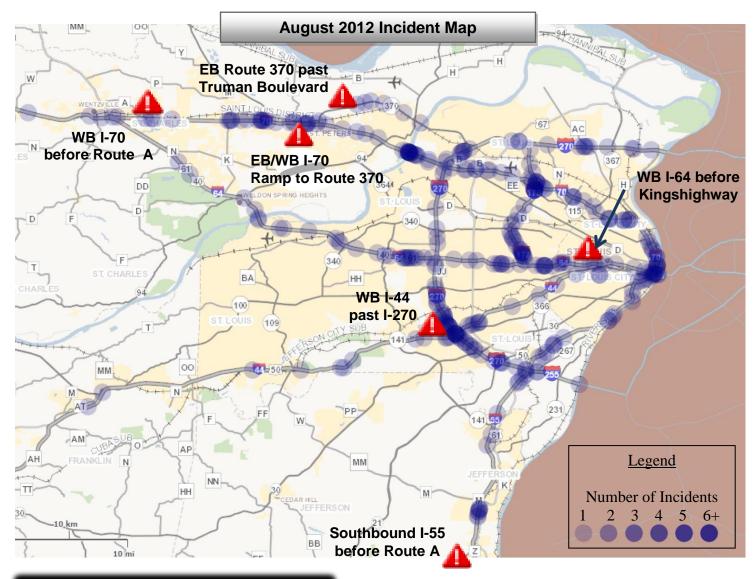












Number of Incidents								
Interstate	June	yluly	August					
I-70	113	139	100					
I-270	84	102	70					
I-64	46	84	61					
I-55	50	70	35					
I-44	48	57	29					
I-170	22	22	27					
Mo-370	2	1	7					
I-255	2	4	3					
Mo-364	0	0	0					
Total	367	476	332					

Denotes Location of Major Impact Traffic Incidents

- The incident details and mitigation actions along with the results are outlined on page 6
- Please note that traffic engineering assumptions were made when describing the approximate number of vehicles and people impacted.
- These estimates provide a simple method to describe the impact on the motoring public.

Number of Major Impact Incidents

July 2012 vs August 2012







### **Major Impact Traffic Incidents and Mitigation**

#### 8/1/12 (Wednesday)

- Time: 12:39 am 7:41 am \*\*AM Rush Hour\*\*
- Location: St. Charles County Eastbound Route 370 past Truman Boulevard
- Event: Multi-vehicle fatal crash involving 3 tractor trailers, a pick-up, and a hazmat spill
- Action: Transportation Management Center posted advanced highway messaging on roadside message boards advising motorists of the crash. State EOC and Motor Carriers were notified. MoDOT Emergency Response, maintenance and Incident Management Coordinator were dispatched to the scene. Accident reconstruction conducted by MSHP.
- **Estimated Initial Impact:** Three left lanes closed forcing motorists to experience additional travel time. Eastbound and Westbound I-70 ramps to Route 370 were closed and traffic diverted to Cave Springs /Truman Boulevard exit.
- Result: Crash resulted in the death of a St. Louis City Alderman. All lanes opened at 7:41 am with a 1 hour and 9 minute queue. A secondary crash on Westbound I-70 exit ramp to Eastbound Route 370 occurred at 5:23 am and took 2 hours and 16 minutes to clear. An after action debrief took place within one week of the crash that included Federal Express, Tow Company, MSHP and MoDOT.
- **Duration**: 7 hours 2 minutes with no queue for either crash when lanes opened at 7:41am

#### **8/8/12 (Wednesday)**

- **Time:** 11:40 pm 3:36 am
- Location: St. Louis City Westbound I-64 before Kingshighway
- **Event:** A vehicle crash that turned into a maintenance repair on a bent light pole blocked the two left lanes and the left shoulder
- Action: Transportation Management Center posted web-based and text message alerts, displayed advanced messaging on roadside message boards informing motorists of the closure and to use an alternate route. MoDOT Emergency Responders were dispatched to the scene.
- Estimated Initial Impact: Left shoulder and left lane closed by emergency vehicles
- Result: All lanes opened at 3:36 am with a 13 minute gueue.
- **Duration**: 3 hours 56 minutes









### **Major Impact Traffic Incidents and Mitigation**

#### 8/10/12 (Friday)

- Time: 6:49 pm 9:25 pm \*\*Arterial Mitigation\*\*
- Location: St. Charles County Westbound I-70 before Route A (Wentzville)
- Event: A fatal crash involving a single vehicle (SUV) with an ejection closed all lanes
- Action: Transportation Management Center posted web-based and text message alerts, displayed advanced highway messaging on roadside message boards informing motorists of the closure and warning of extreme delays. MoDOT Emergency Responders were dispatched to the scene along with the Coroner. Remote access to signal timing made by a traffic engineer for the Lake St. Louis exit.
- Estimated Initial Impact: Heavy queuing with a 3 mile back up causing additional travel time for 2800 motorists.
- **Result:** Discussions at site on proper procedures for removal of the deceased coupled with a 2 ½ hour wait for coroner to arrive on scene severely hampered clearance. All lanes opened at 9:25 pm with a 20 minute queue.
- Duration: 2 hours 36 minutes

#### 8/14/12 (Tuesday)

- Time: 4:30 am 12:48 pm \*\*AM Rush Hour\*\*
- Location: St. Louis County Westbound I-44 past I-270 (Soccer Park)
- **Event:** A Tractor Trailer overturned spilling pallets containing 90 steel engine crank parts all over the roadway







- Action: Transportation Management Center posted web-based and text message alerts, displayed advanced highway messaging on roadside message boards informing motorists of the closures. MoDOT Emergency Responders were dispatched to the scene
- Estimated Initial Impact: Three Lanes of Westbound I-44 were closed
- Result: Crash occurred during two other fatal accidents limiting the number of MoDOT personnel immediately available to respond. Traffic was diverted to I-270 or Lindbergh as alternate routes. Lanes 1 and 2 were opened at 6:00 am. Minor towing helped clear the steel engine parts from the roadway. A loader was used to assist in loading these 90 pieces one at a time off the overturned truck into a new truck. All lanes opened at 12:48 pm with no queue.
- **Duration**: 8 hours 18 minutes









### **Major Impact Traffic Incidents and Mitigation**

#### 8/17/12 (Friday)

- Time: 5:57 am 2:00 pm \*\*AM Rush Hour\*\*
- Location: Jefferson County Southbound I-55 before Route A
- **Event:** A garbage truck traveling through a work zone hit the attenuators and jumped the Jersey wall spilling fuel and debris on the roadway













- Action: Transportation Management Center posted web-based and text message alerts, displayed advanced highway messaging on roadside message boards informing motorists of the crash and to seek an alternate route. MoDOT Emergency Responders, Maintenance Superintendent, and Construction Inspector were dispatched to the scene. Police responded along with the Department of Natural Resources who required the scene to be closed.
- Estimated Initial Impact: All Lanes closed
- **Result:** Trash truck spilled approximately 15 gallons of fuel and a wide area of debris. Traffic queued to Pevely approximately 4 miles, causing additional travel times for 2,112 vehicles. 2,536 motorists with 66 vehicles per minute adding to the queue
- **Duration**: 8 hours 3 minutes







### **High/Moderate Impact Traffic Mitigation Events**

#### 8/10/12 (Friday) \*\*Arterial Mitigation for Major Impact Incident\*\*

- Location: St. Charles County, Westbound I-70 before Route A (Wentzville)
- Event: Crash on Westbound I-70 just west of Lake St. Louis Boulevard with a full closure
- Time: 8:00 pm 9:35 pm Total Time: 1 hour 35 minutes
- Action: Traffic was detoured via Lake St. Louis Blvd to the South Outer Road then back onto I-70 Westbound at Route A. The signals at Lake St. Louis run free during this time of day so signal timing was adjusted to increase the ramp timing at the Westbound ramp signal and min recall was removed from their phases and placed on a max recall. The South Outer Road was also adjusted from a max time and placed on a max recall. Once crash was cleared on I-70, traffic using detour was allowed to clear and then signal timing was adjusted back to normal.
- **Result:** Adjustments were successful in improving flow of detouring traffic and reducing congestion on the westbound Lake Saint Louis exit ramp. Increasing the timing helped to keep traffic moving despite a full closure of the Interstate.

#### 8/10-8/13 and 8/24-8/27 (Weekend)

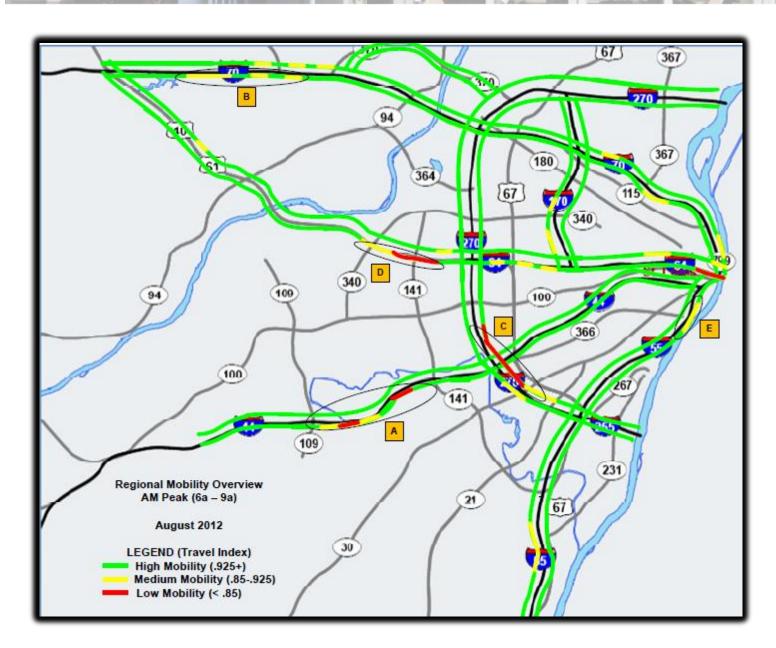
- Location: Westbound I-64 between Broadway and 21st.
- Event: Detour route was westbound I-44 to Jefferson, then north on Jefferson to I-64.
- Time: Weekend closure
- **Action:** Jefferson corridor which includes the interchange at I-44, Route 100/Chouteau and the I-64 interchange was set up as a system to run morning plan 2/4/1.
- **Result:** This morning timing plan helped accommodate the increased northbound traffic on Jefferson Avenue. I-70 at Route 115/Salisbury/McKinley Bridge was pre-programmed to run McKinley diversion plan to accommodate the traffic using Illinois Route 3 as a detour route.

#### 8/30/12 (Thursday)

- Location: EB I-64 between Jefferson and the PSB
- Event: Overnight closure of I-64.
- **Time:** 8:00 pm 5:00 am **Total Time** 9 Hours
- **Action:** Detour route was to exit I-64 at Jefferson, then south on Jefferson to I-44 East, then I-55 North to return to the PSB. Jefferson corridor which includes the interchange at I-44, Route 100/Chouteau and the I-64 interchange. This was set up as a system to run evening plan 3/4/1.
- Result: This evening plan 3/4/1 helped to accommodate increased southbound traffic on Jefferson.







### AM Peak Changes in August 2012

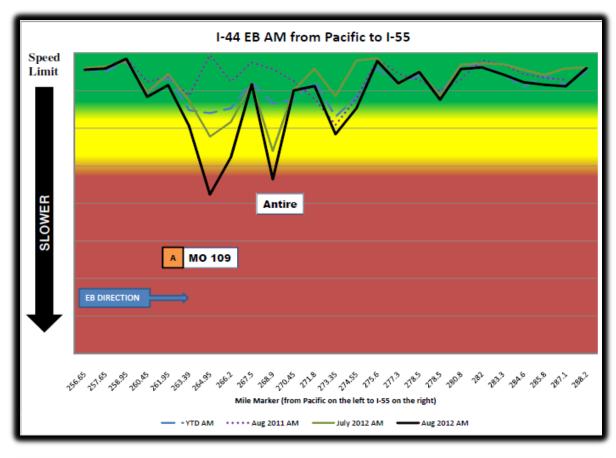


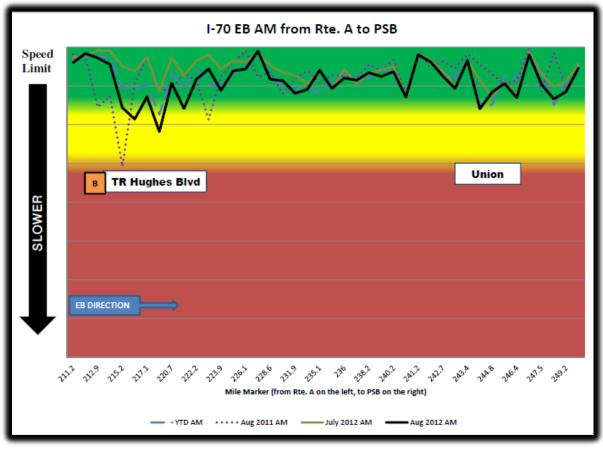


<sup>\*</sup>All weekdays are included in speed index calculation





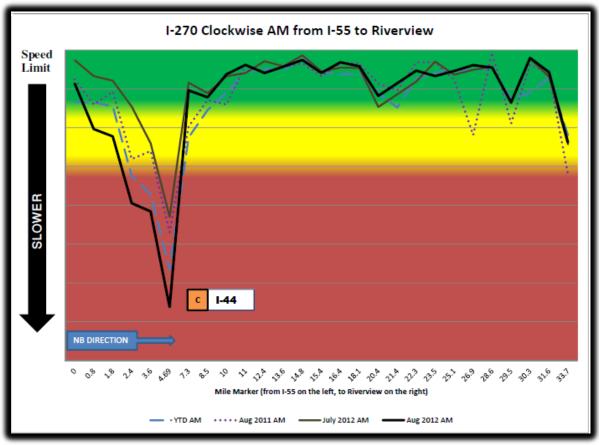


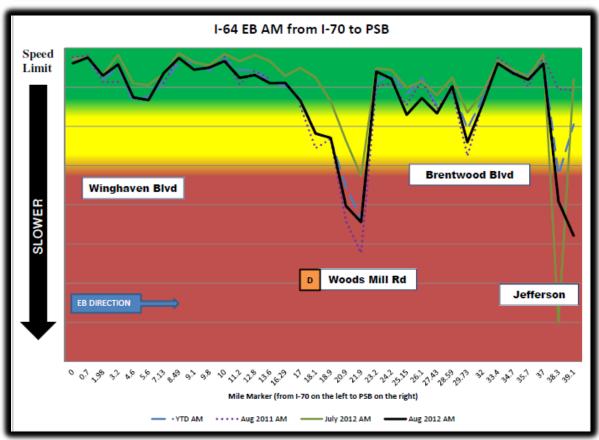








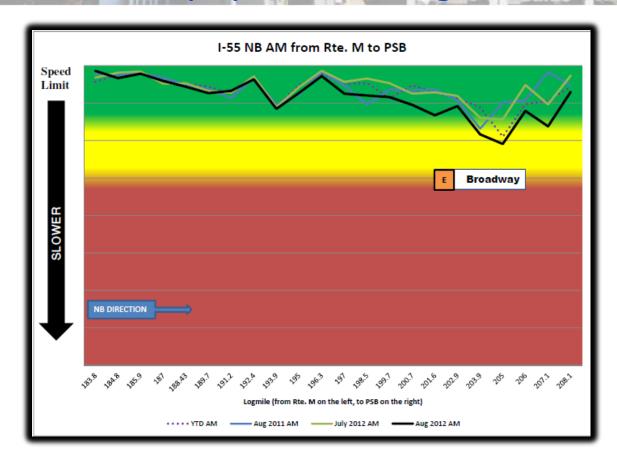






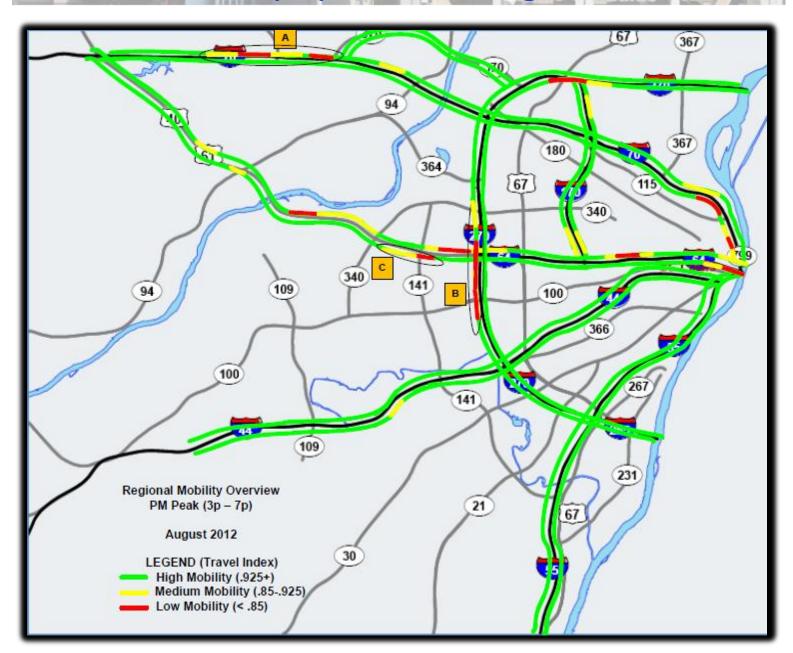












### PM Peak Changes in August 2012

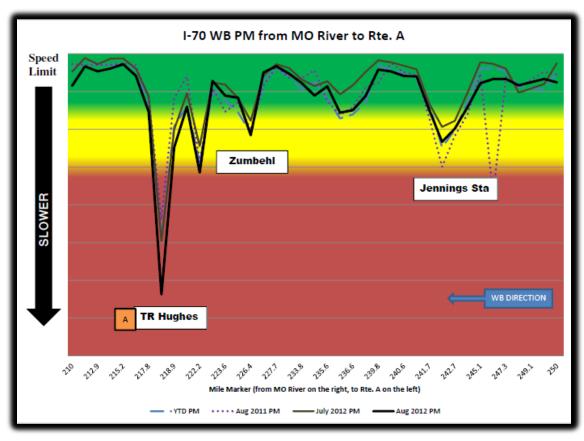


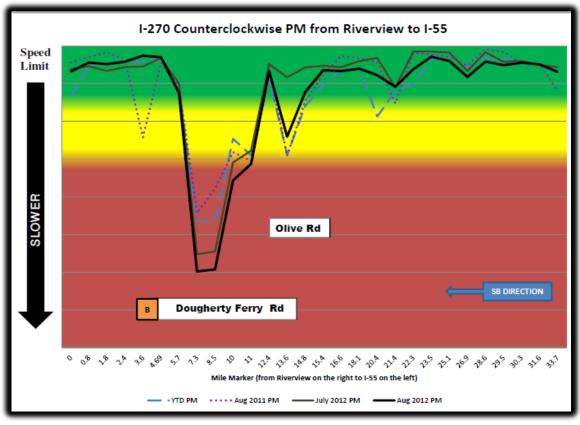


<sup>\*</sup>All weekdays are included in speed index calculation





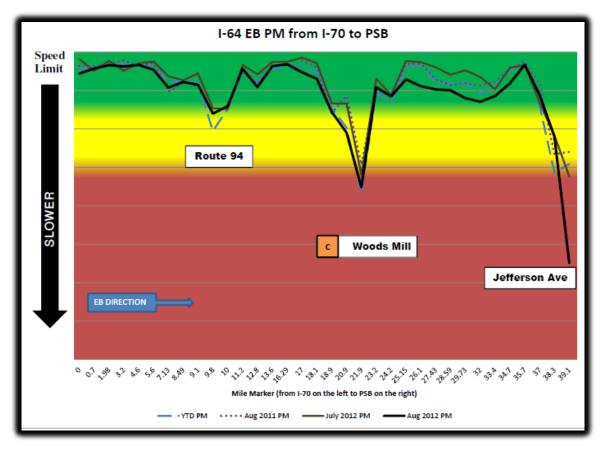


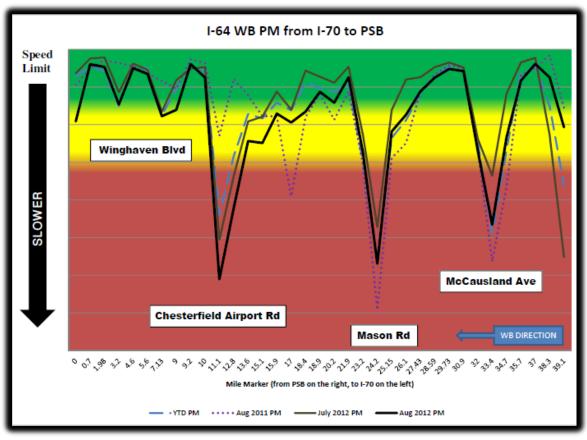


















# Average Rate of Travel on Selected Signalized Routes by Calendar Year Average Travel Time per Mile Arterial Management

The purpose of this measure is to determine how well selected arterials across the region are operating during the peak traffic times. As improvements are made, such as signal timing, equipment upgrades, or access management improvements, this measure will show the effects of those efforts and decisions on the arterial system.

Travel times are measured on various arterial routes. For most routes, data is collected from driving each route multiple times during the A.M. and P.M. peak periods and timing how long it takes to traverse the route. For Rte. 141 and US 67, the Sensys Travel Time system is utilized to determine the travel times and allows a much more comprehensive collection of data. The travel time is compared to the speed limit and the average minutes per mile are calculated. An average minutes per mile based on a perfect run through the corridor is calculated and used as the baseline for comparison. If the actual average minutes per mile are at the baseline, traffic is moving at the speed limits without any stops.

The routes where data was collected include the following: Route 141\*, from I-55 to I-64 Route 30, from Route PP to Weber Hill Road Route 100, from Route 340 to Maple Lane US 50, from Union West City Limit to Denmark US 67\*, from Route 367 to I-270

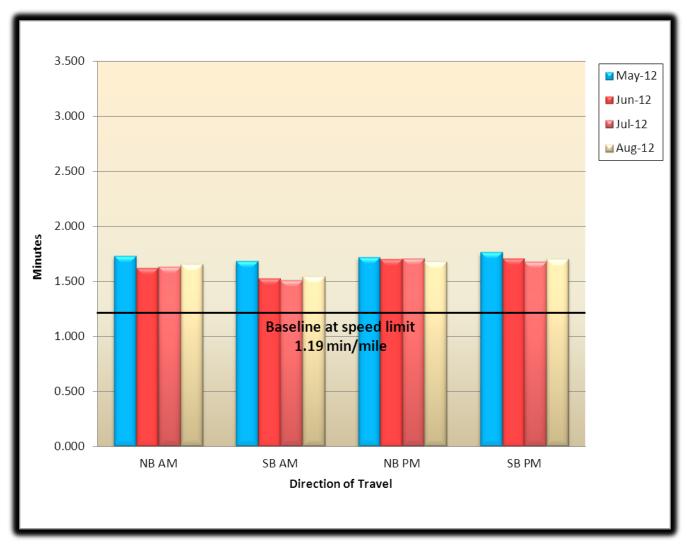
\* Routes where data was collected using Sensys system.







# Route 141, from I-55 to US 40 St. Louis and Jefferson Counties



The travel times continue to be very stable over the past 3 months. No fluctuations to report.

Number of Signals - 41

Length of system - 18.6 miles

Speed Limit on this corridor varies from 45 mph to 55 mph

Number of Lanes - this is an urban/rural 4-6 lane expressway with signalized crossovers and several grade separated interchanges.

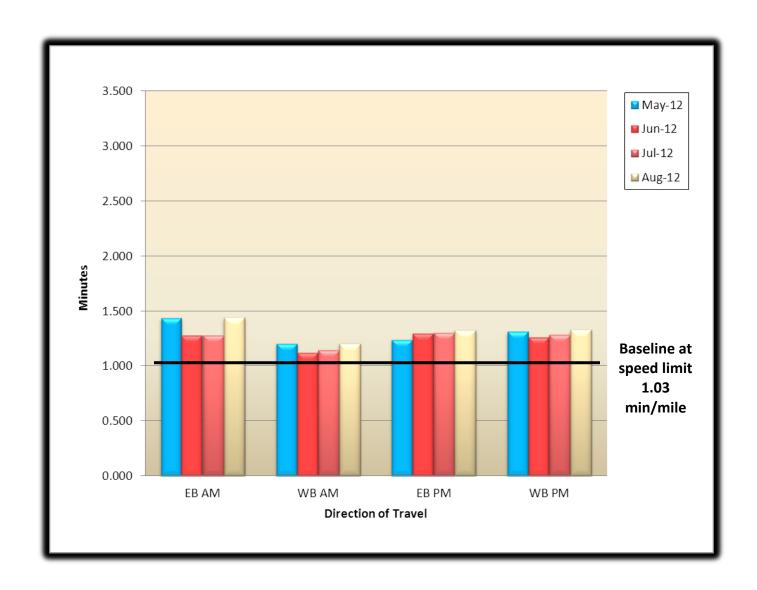
Weighted AADT for length of segment - 35930







# Route 30, from Route PP to Weber Hill Road St. Louis and Jefferson Counties



Travel times are stable, except for a slight rise for the eastbound AM direction.

This system was optimized in 2009 and is scheduled again in 2013.

Number of Signals - 11

Length of system - 9.2 miles

Speed Limit varies from 50 mph and 60 mph

Number of Lanes - this is a rural four lane expressway with signalized crossovers

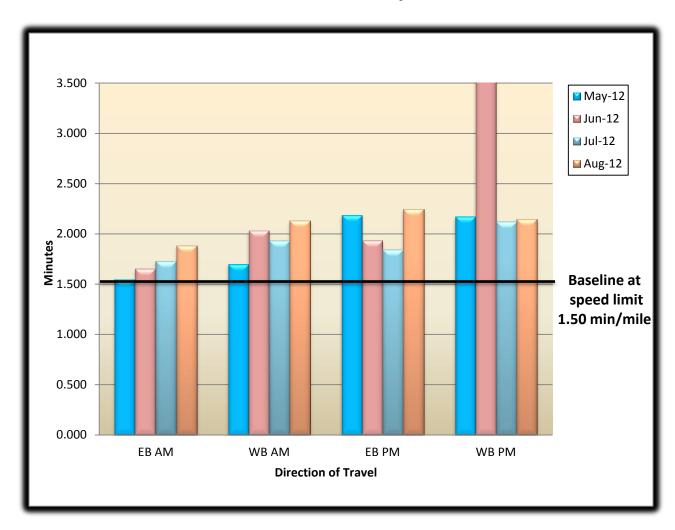
Weighted AADT for length of segment - 38150







# Route 100, from Route 340 to Maple Lane St. Louis County



Travel times are indicating changes since July. There was an increase in all directions except WB PM, where travel times seem to be stable again. The jump in travel time for eastbound AM, westbound AM, and eastbound PM can be attributed to school being back in session.

The optimization plans for this corridor were completed in May. The final results are pending.

Number of Signals - 8

Length of system - 4.2 miles

Speed Limit is 40 mph

Number of Lanes - this is a five lane section with a two way left turn lane.

Weighted AADT for length of segment - 39500

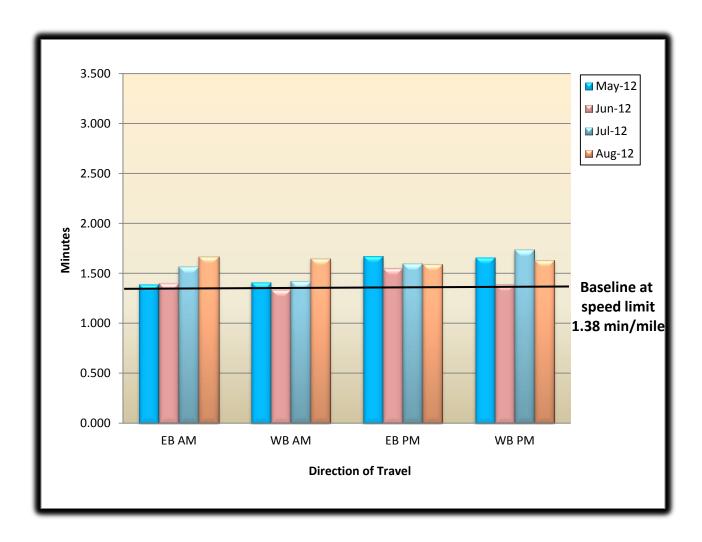
AM peak flow is eastbound. PM peak flow is westbound.







# US 50, from Union West City Limit to Denmark Franklin County



Travel times increased in the AM, likely a result of school being back in session.

This system had signal optimization timings implemented in early July 2011. Additional reviews on throughput and turning allowances at the Rte. 47 intersection are planned for the next quarter upon school resuming.

Number of Signals - 6

Length of system - 6.3 miles

Speed Limit varies between 40 mph and 50 mph

Number of Lanes - this was just recently upgraded to a five lane section.

Weighted AADT for length of segment - 16850

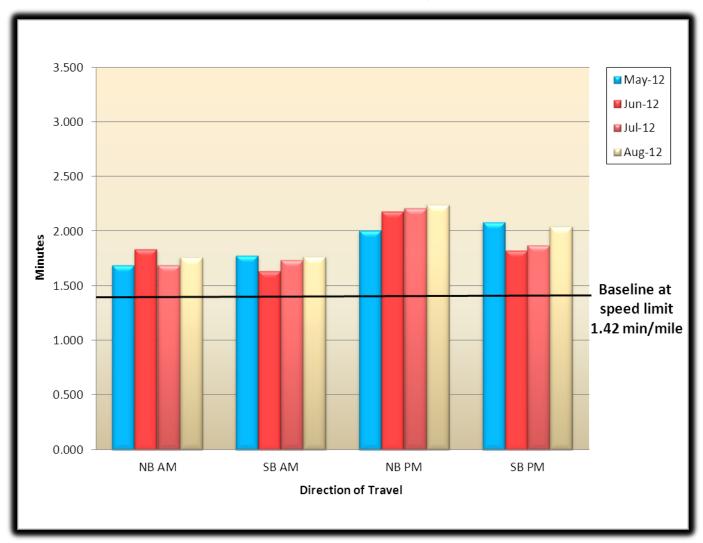
AM peak flow is eastbound. PM peak flow is westbound.







### US 67, from Route 367 to I-270 St. Louis County



No known reasons for the minor travel time fluctuations for AM period, with the exception of school being back in session. The PM movements also show a slight increase in travel times, likely due to school being back in session as well.

Optimization on this system will be completed within the current fiscal year. Most timing adjustments were made in February with slight adjustments since then.

Number of Signals - 19

Length of system - 8.3 miles

Speed Limit varies between 40 mph and 45 mph

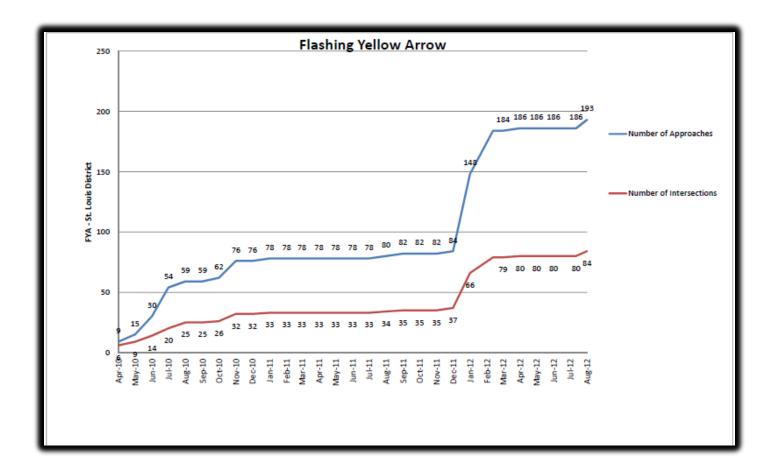
Number of Lanes - this is a five lane section with a two way left turn lane.

Weighted AADT for length of segment - 25450









Flashing Yellow Arrow signals are currently at 193 approaches in August, an increase of five from July. This increases the number of intersections containing Flashing Yellow Arrows to 84 in July, a gain of four from July. Increases were made as part of the MO 141 extension and the MO 364/MO 94 Project.









#### **Work Zones**

Whenever additional travel time is reported, this additional time shall be evaluated using this chart and adequate mitigation measures should begin within the parameters of this chart. TMC and field personnel are partners in the mitigation of traffic and notification of additional travel times should trigger the appropriate response from both parties.

Chart is designed to be an additional travel time reference to establish parameters for gauging the travel impact through work zones and to provide guidance for taking mitigation actions. Travel times can be collected or reported via Blue Toad technology, field personnel, call reports, ITS, TMC cameras, etc.

Major and Moderate impacts trigger an IAR (Immediate Action Required) event. IAR means work zone user and TMC partner together to take immediate actions to reduce or eliminate distress. During an IAR event mitigation procedures can range from increased driver notification up to and including removal of work zone. Additional mitigation procedures may require involvement of administration through use of the work zone resolution ladder.

Level of Impact	Additional Travel Time Expected	Mitigation Actions
Major (Red) <u>IAR Event</u> SEVERE DISTRESS PRESENT	15 minutes or above  TMC and field personnel take all steps possible up to and including removal of lane closure to achieve free	Immediate Action Required  Supervisory mitigation assistance is required using the St. Louis District Work
Return of roadway to free flow traffic is Priority #1	flow threshold	Zone Resolution Ladder as a tool to restore free flow traffic threshold
Moderate (Yellow)  IAR Event  CAUTIONARY STAGE:  Action required by	10 – 14 minutes  TMC increases driver messaging. Field begins efforts to restore free flow	TMC and field shall reach a consensus on mitigation success within 15 minutes or less.  If a consensus cannot be reached, mitigation should be scaled upwards in
Field/ TMC to prevent escalation to a major event	traffic	accordance with the St. Louis District Work Zone Resolution Ladder









#### **Incident Levels**

### Major Impact Traffic Incident - Road closure > 2 hours

Major traffic incidents are typically traffic incidents involving hazardous materials, fatal traffic crashes involving numerous vehicles, and other natural or man-made disasters. These traffic incidents typically involve closing all or part of a roadway facility for a period exceeding 2 hours.

Moderate Impact Traffic Incident – <u>Blocked travel lanes/closure 30 min – 2 hours</u> Moderate traffic impact incidents typically affect travel lanes for a time period of 30 minutes to

2 hours, and usually require traffic control on the scene to divert road users past the blockage. Full roadway closures might be needed for short periods during traffic incident clearance to allow traffic incident responders to accomplish their tasks.

#### Minor Impact Traffic Incident – <u>Lane closures < 30 minutes</u>

Minor traffic incidents are typically disabled vehicles and minor crashes that result in lane closures of less than 30 minutes. On-scene responders are typically law enforcement and towing companies, and occasionally highway agency service patrol vehicles.

#### **Definitions**

**511 –** Gateway Guide's phone line for automated call-in travel information in the St. Louis Metro Area

**511 Floodgate Message** – Road closure message sent from the TMC that is read at the beginning of a 511 call and posted to the banner on the website

ACTRA – Traffic signal management software program

Alert – Email message sent regarding an incident or event on the roadway

Arterial - Missouri State Highway Numbered Routes, not fully access controlled

**Arterial Device** – ITS equipment located along MoDOT arterials

**Average Minutes per Mile –** Number of minutes for a vehicle to travel one mile of roadway averaged over a section of roadway

**BlueTOAD -** a (Bluetooth Travel-time Origination and Destination) traffic monitoring system to collect high quality high density travel times by sampling a portion of actual travel times

**CFI** – Continuous Flow Intersection, at grade intersection configured to move turning vehicles conflicting with through movements out of the main intersection.

**DMS - Dynamic Message Signs** 

**Defined Sensor** – A single sensor with an individual ID focused on a particular roadway; multiple defined sensors may be located at one physical sensor location

**Driver messaging –** Messages placed on DMS boards to alert drivers of incidents ahead of their direction of travel









**EOC** – Emergency Operations Center operated by MoDOT at the central office in Jefferson City

**ER** – MoDOT's Emergency Response units that provide emergency assistance during nights and weekends typically not covered by Motorist Assist units

**Freeway Device –** ITS device located along a MoDOT freeway, such as interstates and other fully access controlled highways

**Gatewayguide.com** – Gateway Guide's website for local St. Louis area traffic information

**GuidePost** – Area of report highlighting important mobility topics for the month

**IDOT - Illinois Department of Transportation** 

**KCScout** – Gateway Guide's counterpart for the greater Kansas City Metropolitan area, a collaboration involving both MoDOT and the Kansas DOT

**Mobility** – Ease of movement over roadway, through system, and or work zone

**MMU** – Conflict monitor hardware installed at a signal system

MRB - Mississippi River Bridge under construction north of downtown St. Louis

Observed Work zone – Work zone tracked by traffic cameras at the TMC

**Peak Average –** Daily speed sensor readings over an entire weekday rush commute period averaged for an entire month

**PSB -** Poplar Street Bridge

**Regional Mobility Overview –** Map depicting congestion areas based on speed index ratings derived from speed sensor readings

**Speed Index –** a ratio of the speed at which vehicles travel during a period to the speed at free-flow conditions

**Stats to Watch –** Area of report highlighting interesting trends for the report month, or data to be closely followed

**STLtraffic** – Email group consisting of Gateway Guide personnel and Gateway Guide's media partners, messages sent to the group are also posted on Twitter

**TMC –** Traffic Management Center (also referred to as Gateway Guide)

TMC Alert - Email alert sent to an internal group of Gateway Guide personnel

VDS - Video Detection System, signal equipment used to detect vehicles at an intersection

**Visibility-** Concerning placement of traffic signs, signals, devices, barricades and warning lights for safety within work zone or construction area to help motorist and workers move within a work zone safely; Clearly visible and legible, distinguishable to approaching traffic during day and night, aligned with road user's line of vision, and positioned as to not obstruct other applicable traffic control devices. Must meet MUTCD standards for condition and must be covered, turned or properly stowed when not in use.

**Zoning In –** section of report highlighting important construction topics for the report month









### I-70 Mile Markers

ST. CHARLES COUNTY					ST. CHARLES COUNTY					
5TH ST SOUTH (ST. CHARLES)	0004			2204						
	229A			-	i	i	229A 229B	5TH ST SOUTH (ST. CHARLES)		
5TH ST NORTH (ST. CHARLES)  ST. LOUIS COUNTY	229B								2290	5TH ST NORTH (ST. CHARLES)  ST. LOUIS COUNTY
					000					
BLANCHETTE BRIDGE	230				1	230	BLANCHETTE BRIDGE			
EARTH CITY EXPRESSWAY SOUTH	231A			231A	EARTH CITY EXPRESSWAY SOUTH					
EARTH CITY EXPRESSWAY NORTH	231B		ı	231B	EARTH CITY EXPRESSWAY NORTH					
I-270	232			232	I-270					
MCKELVEY RD OVERPASS (BRIDGETON)	233			233	MCKELVEY RD OVERPASS (BRIDGETON)					
RTE 180/ST. CHARLES ROCK RD (BRIDGETON				234	RTE 180/ST. CHARLES ROCK RD (BRIDGETO)					
US 67 SOUTH (BRIDGETON)	235A			235A	US 67 SOUTH (BRIDGETON)					
US 67 NORTH (BRIDGETON)	235B			235B	US 67 NORTH (BRIDGETON)					
CYPRESS RD (BRIDGETON)	235C		ı	235C	CYPRESS RD (BRIDGETON)					
AIRFLIGHT (ST. ANN)	236			236	AIRFLIGHT (ST. ANN)					
MCDONNELL OVERPASS (BERKELEY)	237			237	MCDONNELL OVERPASS (BERKELEY)					
LAMBERT AIRPORT (BERKELEY)	238A	l-	. T	238A	LAMBERT AIRPORT (BERKELEY)					
I-170 NORTH (BERKELEY)	238B			238B	I-170 NORTH (BERKELEY)					
I-170 SOUTH (BERKELEY)	238C	DIS	ISIO	238C	I-170 SOUTH (BERKELEY)					
NORTH HANLEY (BERKELEY)	239	ĪŖ	TRICT	239	NORTH HANLEY (BERKELEY)					
RTE N/FLORISSANT RD (COOL VALLEY)	240A	CT	CT 6	240A	RTE N/FLORISSANT RD (COOL VALLEY)					
BERMUDA DR (NORMANDY)	240B	Ε Ε		240B	BERMUDA DR (NORMANDY)					
RTE U/LUCAS AND HUNT RD	241B	AST	ESI	241B	RTE U/LUCAS AND HUNT RD					
JENNINGS STATION RD (PINE LAWN)	242C	STBO	ВО	242C	JENNINGS STATION RD (PINE LAWN)					
ST. LOUIS CITY		ÜND	WESTBOUND		ST. LOUIS CITY					
GOODFELLOW (ST. LOUIS)	243A	ľ	0	243A	GOODFELLOW (ST. LOUIS)					
RIVERVIEW/BIRCHER (ST. LOUIS)	243B			243B	RIVERVIEW/BIRCHER (ST. LOUIS)					
UNION (ST. LOUIS)	244A		ı	244A	UNION (ST. LOUIS)					
KINGSHIGHWAY (ST. LOUIS)	244B		ı	244B	KINGSHIGHWAY (ST. LOUIS)					
SHREVE (ST. LOUIS)	245A			245A	SHREVE (ST. LOUIS)					
WEST FLORISSANT AVE (ST LOUIS)	245B			245B	WEST FLORISSANT AVE (ST LOUIS)					
NORTH BROADWAY (ST. LOUIS)	246A			246A	NORTH BROADWAY (ST. LOUIS)					
ADELAIDE (ST LOUIS)	246B			246B	ADELAIDE (ST LOUIS)					
GRAND (ST. LOUIS)	247			247	GRAND (ST. LOUIS)					
SALISBURY (ST LOUIS)	248A			248A	SALISBURY (ST LOUIS)					
BRANCH (ST LOUIS)	248B			248B	BRANCH (ST LOUIS)					
MADISON (ST LOUIS)	249A			249A	MADISON (ST LOUIS)					
PINE ST OVERPASS (ST LOUIS)	250		į	i	i	i	i	i	250	PINE ST OVERPASS (ST LOUIS)
CHESTNUT ST OVERPASS (ST LOUIS)	250									
MARKET ST OVERPASS (ST. LOUIS)	250			250	MARKET ST OVERPASS (ST. LOUIS)					
WALNUT ST OVERPASS (ST LOUIS)	250			250	WALNUT ST OVERPASS (ST LOUIS)					









### I-70 St. Charles County Mile Markers

RTE A (WENTZVILLE)	212			212	RTE A (WENTZVILLE)		
LAKE ST. LOUIS BLVD (LAKE ST. LOUIS)	214			214	LAKE ST. LOUIS BLVD (LAKE ST. LOUIS)		
BRYAN RD (O'FALLON)	216	l .	1-70			216	BRYAN RD (O'FALLON)
RTE K/RTE M (O'FALLON)	217	1-70		217	RTE K/RTE M (O'FALLON)		
T.R. HUGHES BLVD (O'FALLON)	218	DIST	DIS	218	T.R. HUGHES BLVD (O'FALLON)		
RTE 79 (ST. PETERS/O'FALLON)	220	I — I ·	STRIC	220	RTE 79 (ST. PETERS/O'FALLON)		
RTE C/MID RIVERS MALL DR (ST. PETERS)	222	RIC.	$\frac{1}{2}$	222	RTE C/MID RIVERS MALL DR (ST. PETERS)		
SPENCER RD OVERPASS (ST. PETERS)	223		6	223	SPENCER RD OVERPASS (ST. PETERS)		
RTE 370 (ST. PETERS)	224	EAS	¥ E	224	RTE 370 (ST. PETERS)		
CAVE SPRINGS (ST. CHARLES)	225		STBO	225	CAVE SPRINGS (ST. CHARLES)		
ZUMBEHL RD (ST. CHARLES)	227			227	ZUMBEHL RD (ST. CHARLES)		
HAWK'S NEST OVERPASS (ST. CHARLES)	227	ND		227	HAWK'S NEST OVERPASS (ST. CHARLES)		
RTE 94 (ST. CHARLES)	228			228	RTE 94 (ST. CHARLES)		
5TH ST SOUTH (ST. CHARLES)	229A			229A	5TH ST SOUTH (ST. CHARLES)		
5TH ST NORTH (ST. CHARLES)	229B			229B	5TH ST NORTH (ST. CHARLES)		











**I-270 Mile Markers** 

<u> </u>	<u> 0 Mile Markers</u>				
3	KOCH RD	I-255 \	I-255	KOCH RD	3
2	SR 231 (TELEGRAPH RD)	-255 WESTBOUND	EASTBOUND	SR 231 (TELEGRAPH RD)	2
1C	US61-67	OUND	DUND	US61-67	1B
1B	I-55 NORTH			I-55 NORTH	1B
1	I-55 SOUTH			I-55 SOUTH	1A
2	SR 21 (TESSON FERRY RD.)			SR 21 (TESSON FERRY RD.)	2
3	SR 30 (GRAVOIS RD.)			SR 30 (GRAVOIS RD.)	3
5	I-44 EAST/SR 366 (WATSON RD.)			I-44 EAST	5
5	I-44 WEST		<b>^</b>	I-44 WEST	5
		,		BIG BEND RD.	7
8	DOUGHERTY FERRY RD.	v	I-270	DOUGHERTY FERRY RD.	8
10	SR 100 (MANCHESTER RD.)	1-2		SR 100 (MANCHESTER RD.)	10
12	I-64 EAST/WEST/US 40-61 NORTH/SOUTI	I-270	DISTRICT	I-64 EAST/WEST/US 40-61 NORTH/SOUTH	12 A/B
13	SR AB (LADUE RD)	DISTRICT	r C	SR AB (LADUE RD)	13
14	SR 340 (OLIVE BLVD)	콩	6	SR 340 (OLIVE BLVD)	14
16	SR D (PAGE AVE.) EAST		COUNTER	SR D (PAGE AVE.) EAST	16A
16	SR 364 WEST	6 CI	Ž	SR 364 WEST	16B
17	DORSETT RD	CLOCKWISE		DORSETT RD	17
20	I-70 WEST/EAST	Χ×	CLOCKWISE	I-70 WEST	20B
		/ISE	Š	I-70 EAST	20A
20C	SR 180 (ST. CHARLES ROCK RD)		N.	SR 180 (ST. CHARLES ROCK RD)	20C
22	MISSOURI BOTTOM RD/370 WEST	O <sub>M</sub>	SE -	SR 370 WEST	22D
23	MCDONNELL BLVD	FROM I-55	FROM	MCDONNELL BLVD	23
25A	US 67 SOUTH	5 TO	Ž	US 67 NORTH	25A
25B	US 67 NORTH	刀	RI KE	US 67 SOUTH	25B
26	HANLEY/GRAHAM RD.	IVERVIEW	ERVIEW	I-170 SOUTH (EXIT LEFT)	26A
26	I-170 SOUTH	₹	E	HANLEY/GRAHAM	26B
27	NEW FLORISSANT RD	٧	DR.	NEW FLORISSANT RD	27
28	WASHINGTON/ELIZABETH RD.	DR.	₹. To	ELIZABETH/WASHINGTON	28
29	WEST FLORISSANT RD	,		WEST FLORISSANT RD	29
30	SR AC HALLS FERRY RD	V V	<b>I-55</b>	SR AC NEW HALLS FERRY RD	30
			<b>^</b>	NEW HALLS FERRY RD.	30A
31A	SR 367 SOUTH			SR 367 SOUTH	31A
31B	SR 367 NORTH			SR 367 NORTH	31B
32	BELLEFONTAINE RD			BELLEFONTAINE RD	32
33	LILAC AVE.			LILAC AVE.	33
34	RIVERVIEW DR.			RIVERVIEW DR.	34









#### **I-64 Mile Markers**

I-70 WEST EXIT RIGHT/EAST EXIT LEFT	1		_	1A	I-70 WEST
			-	1B	I-70 EAST
PROSPECT RD	1C		<u> </u>	1C	PROSPECT RD
LAKE ST. LOUIS BLVD	2			2	LAKE ST. LOUIS BLVD
SR N	4		_	4	MO N
SR DD/WINGHAVEN	6			6	MO DD/Winghaven
SR K/SR 94	9			9	мо к
				10	MO 94
MISSOURI RESEARCH PARK/TECHNOLOGY DR	12			11	RESEARCH PARK CRL
DANIEL BOONE BRIDGE	13		<u> </u>	13	DANIEL BOONE BRIDGE
CHESTERFIELD AIRPORT RD	14			14	SPIRIT OF ST LOUIS BLVD
				16	LONG RD
BOONE'S CROSSING	17			17	BOONE'S CROSSING
CHESTERFIELD PKWY	19A	I-64 DISTRICT 6 EASTBOUND		19A	CHESTERFIELD PKWY
SR 340 (OLIVE/CLARKSON	19B			19B	MO 340 (OLIVE/CLARKSON)
				20	CHESTERFIELD PKWY
TIMBERLAKE MANOR PKWY	21			21	TIMBERLAKE MANOR PKWY
SR 141	22			22	MO 141 (WOODS MILL RD)
MASON RD	23		_	23	MARYVILLE CENTRE DR
		-64 D	-64 D	24	MASON RD
I-270 SOUTH	25A	)ISTR	ISTR	25A	I-270 SOUTH
I-270 NORTH	25B	ÎCT (	-64 DISTRICT 6 WESTBOUND	25B	I-270 NORTH
SR JJ (BALLAS RD)	26	EAS	WE	26	MO JJ (BALLAS RD)
SPOEDE RD	27	OBIS	STBC	27	SPOEDE RD
US 61-67	28A	S	UND	28A	US 61-67
				28B	CLAYTON RD
MCKNIGHT RD	30			30	MCKNIGHT RD
BRENTWOOD/HANLEY RD	31B			31A	I-170 NORTH
I-170 NORTH	31A			31B	HANLEY RD/BRENTWOOD BLVD
BELLEVUE AVE	33B				
BIG BEND	33A		_	33A	BIG BEND BLVD
MCCAUSLAND	33C				ST. LOUIS CITY
ST. LOUIS CITY				33C	MCCAUSLAND AVE
HAMPTON AVE/OAKLAND AVE	34B			34A	CLAYTON RD/SKINKER BLVD
				34B	HAMPTON AVE
KINGSHIGHWAY	36A			36A	KINGSHIGHWAY
VANDEVENTER AVE	36C			36B	BOYLE
MARKET ST/BERNARD ST	37A				
GRAND AVE	37B				
JEFFERSON AVE	38A			38A	FOREST PARK AVE/GRAND BLVD
CHESTNUT AT 20TH ST	38B			38B	MARKET ST AT 3000 WEST
14TH ST	39B			39A	MARKET ST AT 21ST
11TH ST EXIT LEFT	39C			40A	STADIUM/9TH ST/ TUCKER BLVD
BROADWAY/7TH ST (LAST MISSOURI EXIT)	40B			40C	I-44 WB/I-55 SB/ I-70 WB







### I-55 Mile Markers

JEFFERSON COUNTY					JEFFERSON COUNTY	
RTE M	185			185	RTE M	
MAIN ST(IMPERIAL)	186	I-55 DISTRICT 6 NORTHBOUND I-55 DISTRICT 6 SOUTHBOUND		İ	186	MAIN ST(IMPERIAL)
RICHARDSON RD (ARNOLD)	190			190	RICHARDSON RD (ARNOLD)	
RTE 141 (ARNOLD)	191			191	RTE 141 (ARNOLD)	
ST. LOUIS COUNTY					ST. LOUIS COUNTY	
MERAMEC BOTTOM RD	193			193	MERAMEC BOTTOM RD	
BUTLER HILL RD	195	I-55 I-55	195	BUTLER HILL RD		
I-255 EAST	196A			196A	I-255 EAST	
I-270 NORTH	196B	-55	<b>I-55</b>	196B	I-270 NORTH	
US67/LINDBERGH	197	DIS:	DIS:	197	US67/LINDBERGH	
REAVIS BARRACKS RD	199	TRIC	콗	199	REAVIS BARRACKS RD	
UNION RD	200	o	0	200	UNION RD	
BAYLESS	201A	SOI	<u>N</u>	201A	BAYLESS	
WEBER RD	201B	크	Ŧ	201B	WEBER RD	
ST. LOUIS CITY		ВО	ВО		ST. LOUIS CITY	
GERMANIA (ST. LOUIS)	202B	N N	Z	202B	GERMANIA (ST. LOUIS)	
LOUGHBOROUGH AVE (ST. LOUIS	202C		U	202C	LOUGHBOROUGH AVE (ST. LOUIS	
BATES (ST. LOUIS)	203			203	BATES (ST. LOUIS)	
BROADWAY (ST. LOUIS)	204			204	BROADWAY (ST. LOUIS)	
GASCONADE (ST. LOUIS)	205			205	GASCONADE (ST. LOUIS)	
ARSENAL (ST. LOUIS)	206C			206C	ARSENAL (ST. LOUIS)	
SIDNEY OVERPASS	206			206	SIDNEY OVERPASS	
GRAVOIS AVE OVERPASS	207			207	GRAVOIS AVE OVERPASS	
I-44 WEST (ST. LOUIS)	207			207	I-44 WEST (ST. LOUIS)	
7TH ST/PARK AVE (ST. LOUIS)	208			208	7TH ST/PARK AVE (ST. LOUIS)	









### **I-44 Mile Markers**

FRANKLIN COUNTY					FRANKLIN COUNTY
PACIFIC	257			257	PACIFIC
ST. LOUIS COUNTY				261	ALLENTON/SIX FLAGS
ALLENTON/SIX FLAGS	261				ST. LOUIS COUNTY
RTE 109/RTE W	264			264	RTE 109/RTE W
WILLIAMS RD	265				
LEWIS RD	266			266	LEWIS RD
				269	ANTIRE
RTE 141	272	I-44 DISTRICT 6 WESTBOUND I-44 DISTRICT 6 EASTBOUND	+	272	RTE 141
BOWLES	274			274	BOWLES
MRAZ	274				
		<u>-</u>	4	275	SOCCER PARK
I-270 NORTH	276B		DISTRICT 6	276B	I-270 NORTH
I-270 SOUTH	276A	ITSI		276A	I-270 SOUTH
RTE 366/WATSON	277A	RC			
US 67/LINDBERGH	277B			277B	US 67/LINDBERGH
BIG BEND	278	EAS		278	BIG BEND
		TBC	STB	279	BERRY
ELM	280	Ş	OUND	280	ELM
LACLEDE STATION	282	ā			
ST. LOUIS CITY				283	SHREWSBURY
JAMIESON	284A				ST. LOUIS CITY
				284B	ARSENAL
				285	SOUTHWEST
HAMPTON	286				
KINGSHIGHWAY	287			287	KINGSHIGHWAY
GRAND AVE	288			288	GRAND AVE
JEFFERSON AVE	289			289	JEFFERSON AVE
I-55 SOUTH	290A				
18TH ST	290B				
				290C	12TH ST./GRAVOIS









#### I-170 Mile Markers

I-64 WEST/US 40-61	1A					
I-64 EAST/US 40-61	1B					
		1		1C	GALLERIA PARKWAY	
BRENTWOOD BLVD	1D					
FOREST PARK PARKWAY	1E		I-170 DI I-170 DI		1E	FOREST PARK PARKWAY
LADUE RD	1F			1F	LADUE RD	
DELMAR	2	I-17		2	DELMAR	
EAST/3B WEST SR 340 (OLIVE BLVD)	3A			3	SR 340 (OLIVE BLVD)	
SRD/SR 364 (PAGE AVE)	4	DISTRICT	ISTRIC:	4	SR D/SR 364 (PAGE AVE)	
SR 180 (ST. CHARLES ROCK RD)	5	ਨ ਨ	SIC.	5	SR 180 (ST. CHARLES ROCK RD)	
SR 115 (NATURAL BRIDGE RD)	6	6	6	6	SR 115 (NATURAL BRIDGE RD)	
I-70 EAST (EXIT LEFT)	7A	NOR	7A	I-70 EAST (EXIT RIGHT)		
I-70 WEST (EXIT RIGHT)	7B	뒾	NORTHBOUND	7B	I-70 WEST (EXIT LEFT)	
		ВО	THBOUND	7C	LAMBERT ST. LOUIS AIRPORT	
		N	Z			
SCUDDER	8	U	U	8	SCUDDEN/N. HANLEY RD	
AIRPORT RD	9A			9A	AIRPORT	
				9B	BOEING (EXIT LEFT)	
				9C	N. HANLEY RD	
				10A	I-270 WEST (EXIT RIGHT)	
				10B	I-270 EAST (EXIT LEFT)	

#### **SR 364 Mile Markers**

				11B	HARVESTER RD
		ွ	S	12	HERITAGE CROSSING/JUNGS STATION RD
SR94 EAST/ST. CHARLES	13	R 36	R 364	13	SR 94 EAST/MUEGGE RD
ARENA PKWY/UPPER BOTTOM RD	14	4 E	4 W	14	UPPER BOTTOM/ARENA
MARYLAND HEIGHTS EXPRESSWAY	17	AS-	ES:	17	MARYLAND HEIGHTS EXPRESSWAY
BENNINGTON PL	19	ВО	ТВО		
		Š	NO	21	BENNINGTON PL
I-270 SOUTH	22A	٥	D		
I-270 NORTH	22B				









### **SR 370 Mile Markers**

			1A	I-70 WESTBOUND
		i i	1B	I-70 EASTBOUND
			1C	SPENCER RD
TRUMAN/CAVE SPRINGS RD	2	SR SR	2	TRUMAN/CAVE SPRINGS RD
ELM/NEW TOWN BLVD	5		5	ELM/NEW TOWN BLVD
N 3RD ST/SR 94	7	370 370	7	N 3RD ST/SR 94
DISCOVERY BRIDGE ST. CHAS CO/ ST. LOUIS CO	8	WEST	8	DISCOVERY BRIDGE ST. LOUIS CO/ ST. CHAS CO
EARTH CITY EXPRESSWAY	9	BOU	9	EARTH CITY EXPRESSWAY
ST. LOUIS MILLS BLVD	11	SOUND	11	ST. LOUIS MILLS BLVD
MISSOURI BOTTOM RD	12			
I-270 WEST BOUND	12			
I-270 EAST BOUND	12			

#### **SR 21 Mile Markers**

RT B	164.8		164.8	RT B	
RT BB	165.4	l i	165.4	RT BB	
STADIUM DR UNDERPASS	166.4		166.4	STADIUM DR UNDERPASS	
RTE A	167.8		167.8	RTE A	
SAND CREEK	169	į	169	SAND CREEK	
HAYDEN RD	169.2	(0)	169.2	HAYDEN RD	
GLADE CHAPEL RD OVERPASS	171.4		171.4	GLADE CHAPEL RD OVERPASS	
OLD HWY 21 (GOLDMAN)	172.6	SR X	172.6	OLD HWY 21 (GOLDMAN)	
KLABLE RD OVERPASS	174.2	21 N	174.2	KLABLE RD OVERPASS	
SCHENK RD OVERPASS	175.2			SCHENK RD OVERPASS	
HEADS CREEK	176.4	.4 로 로 176.4		HEADS CREEK	
RT MM	177.7	THBOUND	177.7	177.7 RT MM	
W. FOUR RIDGE RD OVERPASS	179	179		W. FOUR RIDGE RD OVERPASS	
OLD HWY 21 (SHADY VALLEY)	180.4		180.4	OLD HWY 21 (SHADY VALLEY)	
OLD HWY 21 UNDERPASS	182	i	182	OLD HWY 21 UNDERPASS	
WEST ROCK CREEK RD OVERPASS	182.8	182.		WEST ROCK CREEK RD OVERPASS	
OLD HWY 21 OVERPASS	183.2		183.2	OLD HWY 21 OVERPASS	
LONDELL RD	184.2		184.2	LONDELL RD	
OLD HWY 21	184.5		184.5	OLD HWY 21	
SR 141	185.6		185.6	SR 141	

